

This year's annual report cover emphasizes Brush Wellman's leadership in beryllium technology and its position as a worldwide supplier of high reliability engineered materials. Brush Wellman is the only fully integrated beryllium producer in the Free World and offers the broadest range of beryllium products. Our more than 55 years of technical experience, combined with an assured source of ore is unmatched by any other beryllium producer. Brush Wellman's commitment to creating added value through technological innovation, manufacturing efficiency, product quality and environmental control is reflected in our search for better ways to serve the exacting needs of our customers.

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Brush Wellman Inc.

Brush Wellman Inc. is a leading worldwide supplier of high reliability engineered materials. It is a fully integrated producer and supplier of beryllium, beryllium alloys and beryllia ceramic. Brush Wellman also supplies specialty metal systems, precious metal products, and ground engaging cutting edges.

The Company's product lines are supported by a strong commitment to research and development, modern processing facilities and a worldwide distribution network. Produced to meet stringent specifications, Brush Wellman engineered materials find broad application in aerospace and defense, computers and peripheral equipment, construction and mining, electrical machinery, electronic components, automotive electronics, telecommunications and other important industries.

Brush Wellman holds extensive mineral rights in Utah. The proved reserves exceed 6 million tons of bertrandite ore containing 28 million pounds of beryllium. The Company operates the mine and a mill for extraction of beryllium from the bertrandite as well as from imported beryl ore.

Beryllium is a unique metal, combining light weight, strength and excellent thermal conductivity. It is the preferred material for many aerospace and defense applications.

Many industries depend on beryllium alloys. The special combinations of attributes available such as electrical conductivity, the ability to transfer heat, high strength, superior fatigue and corrosion resistance, and formability are ideal for electronic applications. Brush Wellman supplies alloy

material to customers for fabrication in diverse markets such as aerospace, computer, defense, electrical machinery, energy development, automotive electronics and telecommunications.

Beryllia ceramic is an attractive choice for design engineers specifying materials for electronic applications, microwave systems, lasers and telecommunications because of its excellent combination of thermal conductivity and electrical insulating properties. Precious metal products supplied under the established trade name of Williams Precious Metals are used widely in various segments of the electronic markets. A new division, Electronic Components, established in January 1988, combines the resources and technology of the former Ceramic Division and the recently purchased Williams Gold Refining Co., Inc.

Through its Technical Materials, Inc. subsidiary, Brush Wellman offers a broad range of specialty metal systems. These systems are supplied to the automotive, computer, electronic, telecommunications and semiconductor industries.

Brush Wellman's Bucyrus Blades, Inc. subsidiary is a leading supplier of wear-resistant cutting edges and related products for earthmoving and snow removal equipment. An extensive distribution network provides timely service to the construction and mining industries.

Financial Highlights

(Dollars in millions except per share amounts)	1987	1986	Increase
Sales	\$307.6	\$241.4	27.4%
Income	26.2	22.7	15.4%
Income per share	1.38	1.20	15.0%
Dividends per share	.59	.55	7.3%
Shareholders' equity per share	13.17	12.48	5.5%

(Consolidated Financial Statements begin on Page 18.)

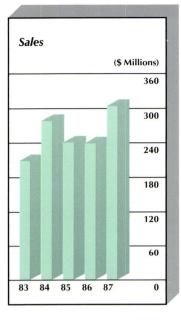


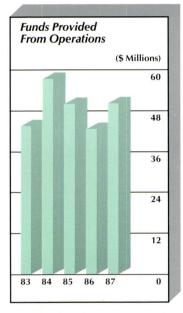


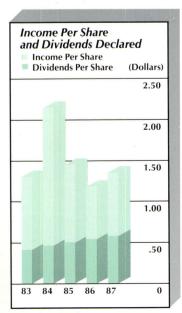




From Continuing Operations









Raymond A. Foos

Sales and earnings increased in 1987 over 1986. We are encouraged that 1987 ended with a strong fourth quarter and the strong demand for our products continues, particularly from our electronic-related markets. Sales for 1987 were \$308 million, an increase of 27 percent over sales of \$241 million in 1986. The Williams Gold subsidiary, acquired in December 1986, contributed \$38 million to sales in 1987. Without Williams Gold, our sales increased 12 percent.

International sales increased to \$81 million in 1987 from the \$50 million reported in 1986 as we continue efforts to penetrate markets outside the United States.

1988 should be a good year for Brush Wellman. Independent forecasts for the electronic components business — the largest end-use market for our products — are optimistic. External business indicators for other Brush Wellman end-use markets are encouraging and our sales backlogs have risen substantially relative to last year's levels.

Net income for 1987 was \$26.2 million, or \$1.38 per share, an increase of 15 percent over the \$22.7 million, or \$1.20 per share, earned in 1986.

Financial Condition

Brush Wellman has the financial resources to support plans for growth as well as to take advantage of opportunities that may arise. Long-term debt of \$25 million remains at 10 percent of total capital. Funds provided from operations, plus the short-term debt increase during 1987, were sufficient for increased operating working capital requirements, capital expenditures, cash dividends and the stock repurchase program. The cash and cash equivalents balance of \$17 million at year-end 1987 is somewhat in excess of current needs.

Operations

Emphasizing market sectors demonstrating significant growth potential, Brush Wellman took important steps in 1987 to broaden its worldwide leadership position as a supplier of engineered materials. In addition, major efforts to achieve increased manufacturing efficiencies and process innovation continued to strengthen our competitive stance in these markets.

Brush Wellman established another first in the industry with the start-up in 1987 of a beryllium and copper recycling facility. The technology provides an economical and efficient means to conserve our resources and improve environmental control.

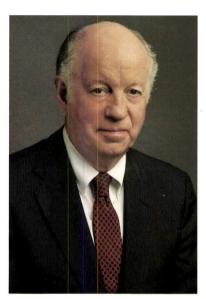
We continued to expand our beryllium metal manufacturing capacity and processing capabilities by adding to our near-net-shape processing facility. The focus of this technology is to more efficiently fabricate products, thereby increasing the potential number of applications in which our customers can economically specify beryllium in their product designs.

Programs are in progress at two businesses to significantly improve profit margins and yields. We believe the Metal Systems Division and the ceramic operation, previously the Ceramic Division, can operate at levels of profitability that are more comparable with our other businesses.

The Metal Systems Division has significantly increased its engineering efforts through reorganization and expansion. Also, during 1987, tin-lead electroplating capabilities were added which offer cost reductions and improved customer service. A new solder print-on line and selective electroplating for precious metals will be installed during 1988.

We reduced ceramic manufacturing operations from three plants to two. This move, combined with a strengthened technical staff, provides opportunities for manufacturing efficiencies and greater technological innovation. In addition, we have combined the resources and technology of the Ceramic Division and the recently acquired Williams Gold Refining Co., Inc. into one division, now known as the Electronic Components Division. We expect this new division to better service its customers and accelerate the development and introduction of new products.

Research and development expenditures increased 23 percent over 1986. Capital expenditures of \$19 million in 1987, combined with an aggressive capital investment program during the preceding five years, reinforce our position as a worldwide supplier of high reliability engineered materials for the future.



Henry G. Piper

Stock Repurchase

In October 1987, the Board of Directors authorized the repurchase of up to 1.9 million shares of Brush Wellman Common Stock. We plan to purchase the shares from time to time in open market transactions. The shares will be held for corporate purposes including shares that might be issued under employee benefit and stock option plans. More than 500,000 shares were purchased by year-end 1987.

Dividends

Effective in the second quarter of 1987, the Board of Directors increased the regular quarterly dividend by 7 percent from 14 cents a share to 15 cents a share, or an annual rate of 60 cents a share. This is the twelfth consecutive year of increased dividends.

Shareholder Rights Plan

In January 1988, the Board of Directors authorized a Shareholder Rights Plan whereby a dividend of one share purchase right for each outstanding share of Common Stock was issued to shareholders of record on February 8, 1988. The rights are intended to protect shareholder value in the event of coercive or unfair takeover tactics. The rights were not adopted in response to any known effort to acquire control of Brush Wellman.

Organization

Henry G. Piper, Chairman of the Board and Chief Executive Officer, has announced plans to retire. As a planned program of succession, Raymond A. Foos, President and Chief Operating Officer, became Chief Executive Officer on January 1, 1988. Mr. Piper will remain Chairman of the Board for the balance of 1988.

Robert C. McManamon, Treasurer and Secretary, retired on December 31, 1987 after 38 years of dedicated service. We extend our sincere appreciation for his contributions to the success of Brush Wellman and wish him an active and fulfilling retirement.

Andrew J. Sandor was named Vice President and General Manager of the newly created Electronic Components Division. He joined Brush Wellman in 1961.

Herbert A. Spring, Jr., a member of the Board of Directors since 1972, retired from the Board in February, 1988. Morris H. Wright, who has been a member of the Board of Directors for nearly thirty years, will not stand for re-election at this year's Annual Meeting in April. We want to express our appreciation for the many years of distinguished service by these two gentlemen. William P. Madar, President and Chief Executive Officer of Nordson Corporation, is a nominee to become a member of the Board of Directors.

Technological innovation is vital to achieving our strategic objectives and to enhance shareholder value. We depend heavily on our employees who are dedicated to excellence and committed to profitable growth. Our progress in containing costs, improving productivity and broadening the Company's leadership in world markets is a tribute to their skill and loyalty.

Raymond A. Foos President and Chief Executive Officer

Kaymond a. Food

March, 1988

Henry G. Piper Chairman of the Board

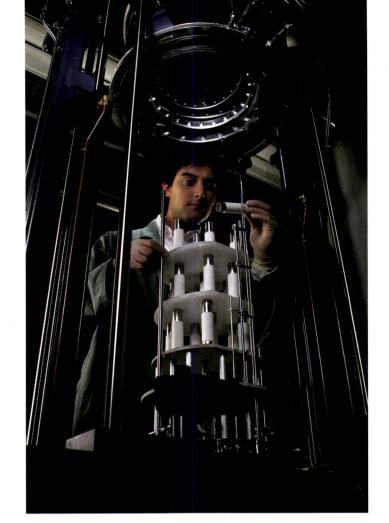
Henry of Tiper

Resources and Technology

The principal domestic source of beryllium is bertrandite ore, found in commercial quantities at Brush Wellman's mining properties in Utah. Along with imported beryl ore, bertrandite ore from the Company's mine is processed at its extraction mill in Delta, Utah, the only such facility in the Free World. The extraction product is beryllium hydroxide which is converted into bervllium-containing alloys, beryllium metal and ceramic grade beryllium oxide powder at the Company's Elmore, Ohio, plant.

A major strategy is to identify and capitalize on opportunities related to Brush Wellman's natural resources and technological strengths. The primary thrust of the Company's research and development activities is the development of new and innovative, high quality materials. This is accomplished through investments in human resources, supplemented with state-of-the-art technical equipment and years of experience. Also, of great importance are the engineering activities directed at developing better and more cost-competitive manufacturing methods and processes.

Brush Wellman's research and development assistance is available to customers and prospects throughout all phases of design, engineering and manufacturing, as well as for technical service after delivery. It is this commitment to technological and engineering excellence that enables Brush Wellman to successfully pursue opportunities in the dynamic, high technology markets it serves.



This furnace is typical of the process technology improvements Brush Wellman continues to integrate with existing manufacturing. The furnace, which provides improved process control, was also designed to produce beryllia ceramic parts to customer specification in half the time of the previous process.

Bertrandite ore is the principal domestic source for beryllium. Due to the structure of the ore deposits, the mining of bertrandite requires extensive sample testing and precise planning before the ore is lifted. As ore is removed from the open pit, it is stockpiled to provide a consistent blend for mill feed to Brush Wellman's extraction plant near Delta, Utah, approximately fifty miles away.

Brush Wellman's mineral holdings include approximately 13,000 acres of land made up of mining claims and State of Utah Mineral Leases. Through 1987, ore has been processed from only 2,000 acres of these claims. Substantial additional reserves are known to exist within the balance of the Company's holdings, and ongoing drilling programs will further quantify those reserves. An impor-

tant advantage of Brush Wellman's mineral holdings is that the unique geological structure facilitates economical recovery of the ore. Also, the ore is easily and economically transported to our extraction plant.

The Company operates a mill for the extraction of beryllium from the bertrandite as well as from imported beryl ore. The mill and associated technology have been developed by Brush Wellman. Environmental controls have been developed in association with the Company's development of extraction processing techniques.

Although its vast source of ore is a competitive advantage, of much greater importance is Brush Wellman's technological leadership, which has been fostered by years of research and development

as well as cross-divisional exchange of technology. Traditionally a pioneer in beryllium research, Brush Wellman continues to champion efforts to build industry's fundamental knowledge of the material. As technology expands the uses for beryllium's unique properties, the Company is leveraging over 55 years of experience working with beryllium to identify improved processing techniques and develop additional leading-edge applications.

Brush Wellman's strategy calls for continued emphasis on expanding its capabilities in metallurgy, manufacturing processes and new applications research. These activities contribute to the Company's capability to help solve customers' engineered material problems and complement the Company's



marketing activities toward broadening the number of technology-based applications for its materials. This firm commitment to research and development should extend the Company's premier position in growth markets and applications that typically are outpacing the growth rate of the economy.

The following pages present an overview of the role Brush Wellman's resources and technology play in the manufacture of beryllium and other products, in product quality, in environmental control and in marketing.

Brush Wellman holds extensive mineral rights in Utah. We have the ore reserves and extraction capacity to supply worldwide beryllium demand. Long-term self-sufficiency and expertise in process technology and applications development have earned Brush Wellman a leadership position in the beryllium industry.

(At right) Participating in a joint redesign program with a major customer, Brush Wellman was instrumental in significantly reducing the number of components through standardization of parts used in the production of ion lasers. This design breakthrough not only enabled the customer to achieve significant manufacturing efficiencies, but also resulted in improved performance of the end product.



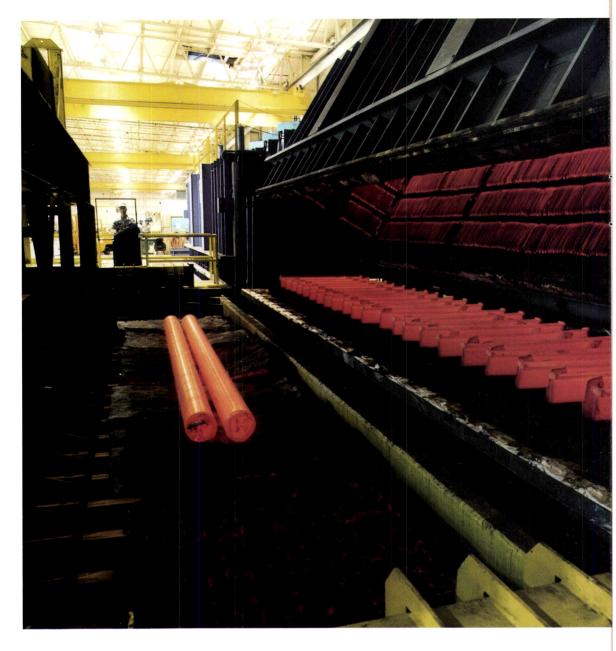
Manufacturing

State-of-the-art facilities and established skills in manufacturing are fundamental to Brush Wellman's success. An industry pace-setter in the development of beryllium manufacturing and process technology, Brush Wellman's strategy is to remain a premier manufacturing company with a strong reliance on research and development and engineering, as well as superior product quality and delivery.

An important part of this strategy is to be a leader in meeting customer demands for cost and quality competitiveness. Investments totalling more than \$130 million during the last five years for equipment upgrades and expansion are providing the Company opportunities in productivity, in cost efficiencies, in product design and innovations to meet stringent requirements, and in the capacity to meet the world's demand for beryllium products.

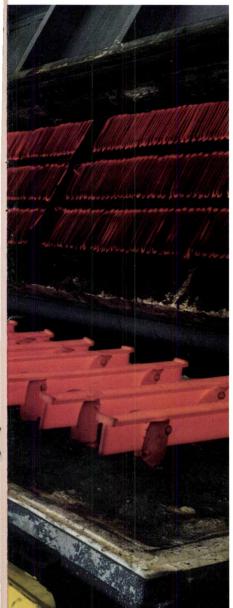
Environmental control is an essential component in the development of manufacturing and process technology at Brush Wellman as well as representing an appreciable percentage of the Company's capital investments. Processes are engineered to insure the health and safety of Brush Wellman employees and to protect the environment.

People are Brush Wellman's most valuable asset and manufacturing is just one area that benefits greatly from their influence. Brush Wellman is committed to offering employees the resources, tools and training necessary for them to realize their full value as contributors to the future of the Company.



Nearly all of our manufacturing processes were developed by and designed for Brush Wellman. The annealing furnace shown above is designed to run at 1200 to 1900°F and can maintain a load temperature uniformity of plus or minus 10°F.

Brush Wellman's standards of excellence in manufacturing and processing technology extend to all its facilities. The Company's commitment to investing in new and existing operations and to continuously improving productivity is essential in sustaining a competitive advantage through technological superiority and manufacturing efficiency. A high priority at Brush Wellman is the containment and control of manufacturing costs with the objective of being the producer with the highest quality at the lowest cost. Alloy - Production of beryllium-containing alloys is performed at Brush Wellman's Elmore, Ohio and Reading, Pennsylvania facilities. These modern and efficient manufacturing facilities are key elements of the Company's leadership position as a supplier of a wide variety of beryllium alloy products. Brush Wellman's extensive knowledge of process technology and control is enabling the Company to offer manufacturing economies to customers and to assure the material's ability to perform under widely demanding conditions.



This is a numerically controlled machine tool typical of the many computer-aided manufacturing additions at Brush Wellman that reduce lead times, improve quality and decrease costs. This automated equipment provides precise accuracy in machining intricate beryllium shapes, extremely thin foil or sheet with excellent tolerance control. Minimum material loss is achieved and damage to the cut surfaces is negligible.

and Reading facilities enables Brush Wellman to keep pace with customer demand associated with economic growth and increased displacement of other materials. Installing modern, custom-designed equipment is an important part of remaining cost-competitive and strengthening the Company's leadership position. During the past three years, Brush Wellman has invested over \$36 million for added alloy capacity, including equipment for productivity, quality improvements, and environmental control.

Extensive metallurgical capabilities support Brush Wellman's efforts to guarantee customers the benefits of world class manufacturing technologies. The Company is a leader in engineering material properties to precise specifications.

Beryllium Metal – The Company's Elmore, Ohio facility processes hydroxide into beryllium metal. A unique combination of physical and mechanical properties makes beryllium an ideal material for a broad range of commercial, aerospace and defenserelated applications. Investments in technology and equipment continue to focus on developing and



The recent expansion of near-net-shape processing facilities, including the installation of a cold isostatic press (CIP) system, significantly expands Brush Wellman's capabilities. The new capabilities complement the hot isostatic press (HIP) system installed two years ago and increase the Company's manufacturing capacity.

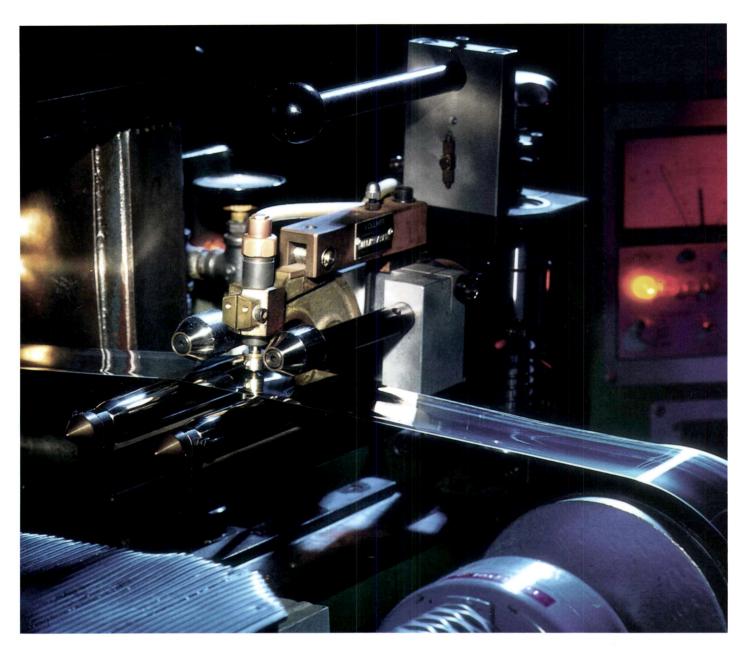
Ceramic - Brush Wellman manufactures beryllia ceramic products at plants in Tucson, Arizona and Newburyport, Massachusetts. A third facility in New Jersey was closed, and the division reorganized during 1987 to achieve greater coordination among production, sales and engineering activities. Other benefits to be realized include quality improvements and more timely product deliveries. This consolidation also facilitated a more integrated approach to manufacturing and greater opportunity for product innovation and cost reduction. The disruption and

start-up activities associated with this consolidation detracted from 1987 operating results.

The unique combination of electrical insulation and high thermal conductivity and strength makes beryllia ceramic ideal for electronic, micro-electronic, semiconductor and laser applications. Brush Wellman has taken a technological lead in producing beryllia ceramic parts to meet the exacting specifications demanded by these industries. A prime example is "green machining," a technique of machining parts before they are fired in a kiln. This operation enables the production of complex shapes and closer tolerances not attainable through traditional ceramic forming processes alone.

The combination of beryllium with certain other metals makes the alloys adaptable to a large number of critical design specifications. Beryllium increases the values of strength and hardness of an alloy. A broad product line of beryllium copper and beryllium nickel alloys, typically containing from three-tenths to two percent beryllium, are supplied in various forms to customer specifications. The alloys are primarily manufactured in the form of strip, rod, wire, bar, tube and plate.

Increasing manufacturing capacity at the Elmore



Williams Precious Metals has created a fully integrated manufacturing facility from pure metals to the finished product. The rolling operation shown above is typical of the technology it has pioneered. All castings are rolled and finished on dedicated mills which are equipped with digital process controls and continuous measurement gauges.

Precious Metals - The Company expanded its product mix to include precious metal products at the end of 1986 with the acquisition of Williams Gold Refining Co., Inc. of Buffalo, New York. Williams provides technological expertise in refining and alloying high purity metals and precision rolling to ultra-thin gauges. A broad range of precious metal products are supplied including very thin gauge high purity contact ribbon, preforms and sealing lid assemblies for semiconductors and contact material for interconnect devices.

Metal Systems - Under the trade name of Technical Materials, Inc. (TMI), Brush Wellman is a worldwide supplier of inlay clad and other specialty metal strips to the electronics industry. With its principal manufacturing facility in Lincoln, Rhode Island, the Company produces a broad range of materials which customers fabricate into switches, relays, connectors, semiconductor lead frames and other electronic components.

The Metal Systems Division manufactures a variety of specialty strips including clad inlays which join pre-

cious or non-precious metal strips into base metal using heat and pressure. It also produces a line of electron beam welded "Dual Metal" strips that comprise two or more metals continuously welded along adjacent edges. Additionally, this division produces composites of nickel iron alloy with a thin stripe of aluminum; solder-coated strip, a base metal selectively striped or coated overall with solder; and multigauge strip, a single base metal contoured along its length to be shaped more closely to the finished part configuration.



People are our most important asset. Brush PRIDE and the Standard of Excellence programs in place at the Alloy Division are exemplary of the integration of employee involvement and process controls to deliver the highest quality, most innovative product at the lowest cost.

Brush Wellman is continuously seeking manufacturing efficiencies and capabilities to better serve its customers. The tin-lead electroplating capabilities shown below are an excellent example. This is a new product line for the Metal Systems Division. The capabilities will lead to new applications as well as benefit existing product lines.

The ability to respond quickly to changing trends, to be flexible to customers' exacting specifications, to assure precise dimensional controls, and to assist customers in developing costeffective design solutions will clearly differentiate the Metal Systems Division from its competitors. Although Brush Wellman maintains a leadership position in this industry, price competition has been very severe and profit margins have suffered. During 1987, tin-lead electroplating capabilities for wide material were added which

offer cost reductions and improved customer service. A new solder print-on line and selective electroplating for precious metals will be installed during 1988.

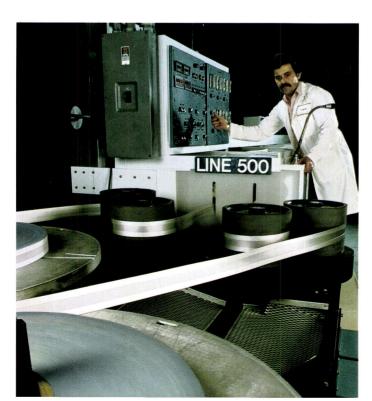
Cutting Edges – Ranked among the leading independent suppliers of cutting edges for earthmoving and snow removal equipment, Brush Wellman's Bucyrus Blades, Inc. subsidiary manufactures a complete line of cutting edges and related wear parts for use on all makes and models of bulldozers, scrapers, graders, loaders, and highway snowplows.

With major manufacturing facilities in the United States and Canada, the Company acquired full ownership of its Mexican joint venture in 1987. Using special quality high-carbon steel in an as-rolled condition or lower carbon steel which is heat-treated, the Company produces cutting edges for original equipment as well as exclusive job-engineered edges for replacement uses.

International – Brush Wellman is applying its technological expertise on a global basis. The full range of engineered materials are available to worldwide markets. The international

technical marketing organization to a large extent relies upon domestic operations as the manufacturing source for products and for technological support.

Currently, Brush Wellman has offshore manufacturing capabilities in Japan and England. The newest facility located in Fukaya, Japan was designed to manufacture specialty clad metals and perform beryllium copper strip finishing. A limited number of specialty metal systems and beryllia ceramic components are manufactured at Brush Wellman's facility in Reading, England.



Quality

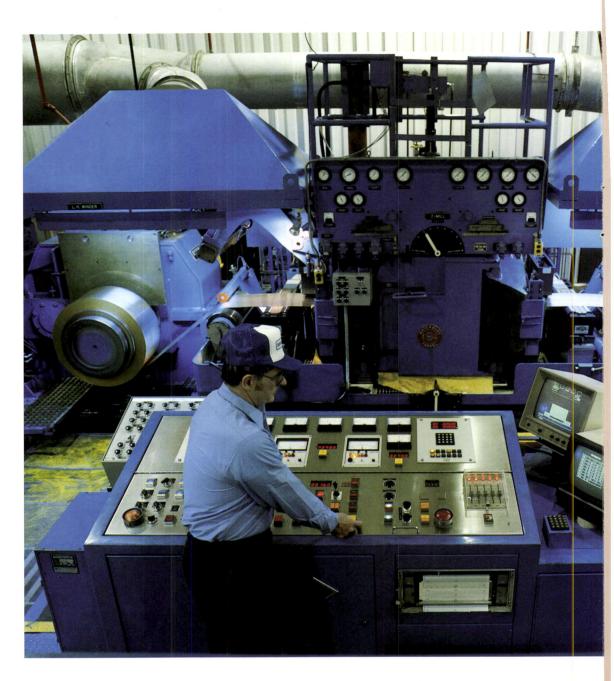
Brush Wellman defines quality as: "Total customer satisfaction." The Company's strategy is to encourage resolute commitment from every Brush Wellman employee to strive for continuous improvement in producing the highest quality products in the world.

Brush Wellman's commitment to quality includes all phases of its relationships with customers. The product must conform to the customer's requirements and specifications. The customer must be satisfied with the function, performance, appearance and fit of the engineered material. Every attempt is made to engineer quality into the product so that the customer will be satisfied with the durability, reliability and cost-effectiveness of Brush's products in the end use application. Moreover, customer service must be consistent before and after the sale.

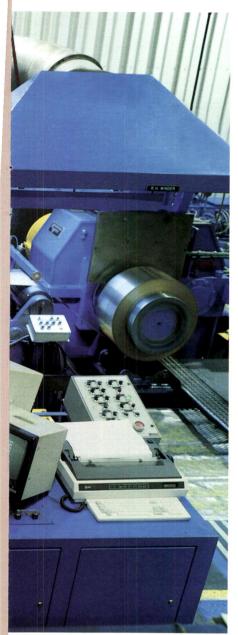
Essential elements of total quality are employees, manufacturing capabilities and process control.

Optimum quality requires commitment and dedication of each employee to best serve the technical requirements of the customers. Each manufacturing facility has integrated various process control procedures to enhance its defect prevention capability.

The ultimate goal of Brush Wellman's quality program is to deliver products that our customers can depend upon to fulfill their needs. The laser inspection equipment (right) is designed to provide the customer with a printed statistical representation of the product upon delivery, thereby assuring a high quality product.







Sophisticated measurement systems and computerized control equipment provide the opportunity to meet more stringent customer specifications and tighter tolerances. Equipment such as the rolling mill (left) result in reduced lead times, higher quality products and lower manufacturing costs.

Digital measurement devices such as the laser micrometer (right) assist employees in efficiently achieving Brush Wellman's standard of quality.

data integrity and reduced maintenance costs, less waste and lower inventory.

Quality begins with a detailed understanding of customer requirements. Working closely as a partner with the customer, Brush Wellman can help resolve material and design challenges. This commitment to building strong customer alliances will enable the Company to further investigate and evaluate new opportunities for quality improvement.

A substantial portion of Brush Wellman's annual capital investment in recent years has been directed toward programs that increase quality and improve productivity. Many of the investments made toward process controls will assure that Brush Wellman facilities maintain state-of-theart status.

The increasing use of computer-aided design and computer-aided manufacturing to reduce product deviation and variability has had a significant impact on Brush Wellman's manufacturing capabilities. Sizable investments in numerically controlled machine tools and in digital measuring equipment are also major contributors to the control and assurance of product quality. The



Brush Wellman also uses specialized computer applications to communicate electronically with customers for orders and shipments. The technology data base at the Alloy Division expedites product engineering and order processing. Automatic generation of certifications at the time of shipment provides customers with fast and accurate information.

During the past year, the Company continued to implement programs to make the quality functions at various divisions more effective. In particular, quality improvement programs for the metal systems and beryllia ceramic operations are typical of the aggressive, comprehensive approach Brush Wellman is taking to improve quality and increase yields.

The Metal Systems Division has, within the last year, significantly increased its engineering efforts through reorganization and expansion. Engineering has traditionally been a great strength at this division and an important factor in its success. The recent improvements in processing

emphasize reduced lead times, better material surfaces and stampability, greater quality consistency and larger coil sizes.

Brush Wellman strengthened the technical staff and consolidated its ceramic operations during 1987 in order to increase yields and improve quality. The consolidation provides opportunities for a more integrated approach to manufacturing and greater technological innovation. Investments have been made in equipment designed to improve process controls, eliminate production bottlenecks and advance technical capabilities.

Brush Wellman is continuously seeking quality improvements that will further differentiate its products from competing materials. Increased customer satisfaction and decreased manufacturing costs through better yields are the benchmarks for Brush Wellman's progress toward total quality.

Brush Wellman's requirements for quality improvement are directed toward developing training programs, improving organizational effectiveness and enhancing divisional performance. Employees are encouraged to approach problem solving with a quality-oriented mind-set and the confidence that their ideas will be recognized and implemented. Also implicit in the Company's goal of leading all competition in quality is its continued emphasis on projects promoting increased efficiency, greater



Environmental Control

Both in the workplace and outside of it, everyone regularly encounters materials, substances and products that are potentially harmful if mishandled. Unlike many industrial materials, the harmful effects of beryllium inhalation were recognized at an early stage of product development. Therefore, environmental controls have advanced in tandem with the technological development of beryllium process engineering.

By observing prescribed standards and proven safety practices, beryllium and beryllium-containing materials are safely used in industrial as well as commercial applications. Independent studies during the last several decades demonstrate the effectiveness of air standards and control measures in reducing the incidence of adverse effects due to beryllium exposure at a time when the uses and applications of beryllium have increased.

Brush Wellman has a superior record of environmental control. The air quality standards for the safe processing of beryllium are among the most stringent in American industry. Brush Wellman's engineers, researchers and health and safety professionals have been in the forefront of sophisticated control technology development. The Company's extraction facility and production equipment installed in the beryllium operations have been designed to reduce airborne beryllium concentrations to the lowest feasible level. In addition, the Company employs extensive by-prod-



uct recycling systems in many of its operations to conserve valuable natural resources and to reduce the generation of process waste.

Working cooperatively with independent and governmental professionals dealing with environmental matters, Brush Wellman has participated in much of

the beryllium research used by governmental agencies to establish air quality standards. The Company continues to make significant investments for environmental equipment to provide a safe workplace as well as to comply with federal, state, and local environmental quality standards.

Brush Wellman extracts 99.9 percent pure copper from waste streams. The copper can be recycled into Brush Wellman's processing operations or sold. After the copper is recovered, the fluid is pumped into a beryllium recovery system.

Brush Wellman has traditionally been a leader in developing techniques for extracting and processing beryllium safely and efficiently. The Company has established extensive environmental controls to protect the health and safety of employees and the natural environment. Frequent inspections at operating sites assist the Company in ensuring that each facility complies with applicable environmental regulations and stringent Company policies.

A major environmental control project completed during 1987 included an \$8 million waste recycling facility at the Company's Elmore, Ohio operations. Providing a highly efficient and economical means for recovering beryllium and copper contained in waste streams from various manufacturing operations, the waste recycling facility can recover nearly 2.5 million pounds of copper and 90 thousand pounds of beryllium annually. The facility was designed to recycle wastes from all Brush Wellman beryllium operations. Although this is the first dedicated recycling facility, it has been a standard practice at Brush Wellman to recycle beryllium and copper whenever possible including scrap from customers.

Brush Wellman has developed and employs extensive control systems, including in-plant ventilation systems, to control airborne beryllium. These systems capture beryllium particles released during the manufacturing process or activity at the point of generation. Typically, the air is collected and flows through a multi-stage air cleaning system before it is released to the outside

Brush Wellman has a long and proud history of developing and maintaining environmental and occupational health and safety controls extending beyond legal requirements. Our physicians oversee employee medical surveillance programs and actively support ongoing independent medical research.

environment. For monitoring purposes, air sampling networks are used to measure the concentration of airborne beryllium both inside and outside the manufacturing facilities.

An integral part of providing employees a safe environment in which to work is Brush Wellman's comprehensive training program for employees. Educational materials include guides for the use of specific machinery and equipment as well as written and videotaped materials on the proper handling of hazardous materials.

The Company's physicians oversee employee medical surveillance programs and actively support ongoing independent med-



ical research. Experience acquired by Brush Wellman's medical personnel over the last several decades contributes toward the development of effective environmental control technology. This knowledge has assisted in the thorough understanding, accurate diagnosis and effective prevention of health hazards associated with excessive exposure to beryllium.

The entire beryllium industry, including customers, has benefited from the joint research programs generated by Brush Wellman and the scientific community. Although the hazards associated with beryllium extraction and processing have not been eliminated, it has been shown that excessive exposure can be effectively controlled and that the benefits associated with the unique properties of beryllium can be realized by observing prescribed standards and proven safety practices.

Brush Wellman's environmental efforts and programs have proven to be significant as its facilities continue to expand and become more complex. The Company remains committed to the health and safety of employees, protecting the environment, and promoting the understanding and safe handling of beryllium.

ment, and promoting the understanding and safe handling of beryllium.

The dust collector (left) is only part of the extensive ventilation and environmental air control systems at Brush Wellman. This state-of-the-art collector offers 99.97 percent efficiency in the final filtering stage before the air is released to the outside environment.

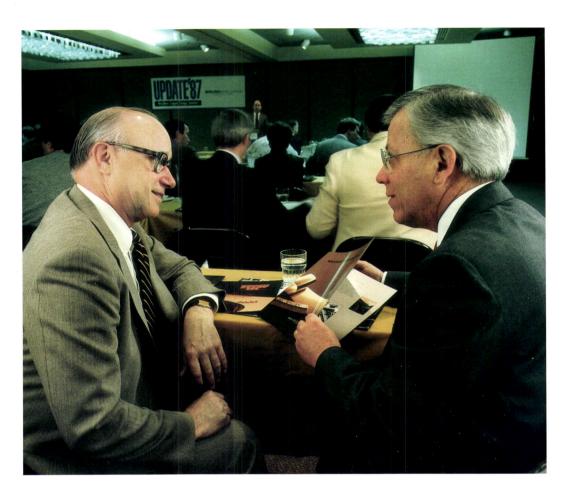


Marketing

Brush Wellman's dedication to achieving excellence in technology and manufacturing extends to the marketing function as well. Recognized for its leadership in the development and production of high reliability engineered materials, Brush Wellman is a primary supplier to major industries such as aerospace and defense, computers and peripheral equipment, electronic components, motor vehicle electronics, and telecommunications.

The Company's overall strategy is to be the low cost producer of the highest quality, most innovative products that best serve its customers. Product development is guided by the performance requirements as well as the material needs of customers' end use products. By playing a partnership role with customers in a number of high technology markets, Brush Wellman is prepared to offer cost-effective solutions to design challenges created by advancing technology.

Keying on innovative cooperative ventures among Brush Wellman's business units provides an important competitive tool in terms of increasing sales growth. The Company's decentralized approach allows the individual business units, listed on Page 36, to apply customized marketing techniques to their markets. This focus and an entrepreneurial environment create opportunities within the businesses to respond quickly to the changing needs of customers.



Strategies to expand and preserve long-term market positions center on increasing penetration against competitive materials, identifying new end use applications, broadening the number of end market segments through development of new products, and pursuing international markets.

A new marketing program was initiated by the Alloy Division in 1987 to ensure a steady flow of technical information to customers and to encourage frank discussions and feedback from customers. The program is a series of design seminars directed specifically to the engineering staffs of companies in electronics, aerospace, automotive electronics and energy markets. Six seminars called UPDATE '87 were held in the U.S. in 1987; and twice as many are planned for 1988 in the U.S., Europe and Asia.

In pursuit of international markets, Brush Wellman continues to explore opportunities for beryllium, beryllium alloys, beryllia ceramic, metal systems and precious metal products in Europe and Asia. Customers in England and Europe are serviced by Brush Wellman distribution centers in Reading, England and Stuttgart, Germany. With a major manufacturing and distribution center in Fukaya, Japan, Brush Wellman has accelerated its product marketing efforts to participate in the economic growth of Asian countries.

Beryllium products and specialty materials are also sold through independent distributors overseas. The Company's Bucyrus Blades subsidiary has its own extensive worldwide distribution network which promotes and supplies cutting edges and related parts.

Successfully serving the

diverse, technology-based needs that arise from domestic and international markets requires a skilled, flexible and experienced sales organization. Brush Wellman marketing representatives are specialists with years of engineering, metallurgical and metals design experience. Combining their extensive expertise in diagnosing customer problems and presenting workable solutions with an effective distribution network is central to the Company's marketing strategy.

Over 50 percent of Brush Wellman's total 1987 sales were generated by electronic-related end markets such as computer and peripheral equipment, telecommunications, and electronic components and instruments. The increasing emphasis on miniaturization, faster processing speeds, higher circuit

(At left) Hundreds of design engineers representing over one hundred companies in the major markets serviced by Brush Wellman's Alloy Division attended the Company's design seminars during 1987. UPDATE '87 represents a company-wide commitment to providing existing and potential customers with access to the technical resources and support that today's applications demand.

(At right) A distinct competitive advantage of our Bucyrus Blades subsidiary is its extensive worldwide network of distributors. The distributor organization is supported with the best available sales tools, service, competitive prices, consistent product quality and a complete line of cutting edges and related wear parts.

amperage and reliability in the electronic industry will continue to increase the number of applications for many Brush Wellman engineered materials.

Beryllium-containing alloy products provide a broad range of cost-effective solutions for electrical current-carrying applications in equipment packages and systems. The excellent performance and long-life characteristics exhibited by beryllium alloys make them preferred materials for use in many connectors, relays and switches in electrical and electronic components.

Specialty metal systems marketed by Technical Materials, Inc. are used in increasing quantities by manufacturers of semiconductors and other electronic devices. The advantages of metal systems, combined with this division's reputation for excellent technical support, will promote the designer's selection of these products and increase demand.

Electronic Components is a new division created in 1988 which combines the resources and technology of the Beryllia Ceramic



Division and the recently acquired Williams Gold Refining Co., Inc. By combining the two, Brush Wellman expects to more efficiently satisfy the needs of customers with existing products as well as to accelerate the development and introduction of new products. Markets for the new division range from automotive electronics and telecommunications to aerospace/defense and medical equipment.

Although automotive electronic sales are currently less than 10 percent of Brush Wellman sales, this market represents an exciting opportunity for growth as the number of electronic applications increase. Material upgrades are necessary in order to

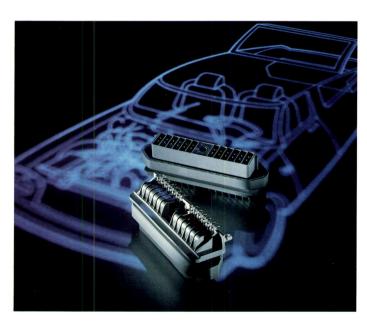
This relay control module connector is an excellent example of the technical support and customer service available at Brush Wellman. Our customer's challenge was to consolidate several relays into one module thereby reducing the size and manufacturing complexity. Reliability in high temperatures and operating efficiency within a wide range of amperage were the requirements. The high conductivity and mechanical strength of our material made it a cost-effective solution to the design challenge.

provide more performance from smaller electronic components as well as improved reliability at higher temperatures. The performance attributes of beryllium alloys, beryllia ceramic and specialty metal systems are becoming increasingly important to automotive component designers.

Aerospace and defense applications generated approximately 30 percent of Brush Wellman's total 1987 sales. Opportunities to increase the number of applications in this market continue with the increasing number of electronic

applications, the development of strategic defense applications and more sophisticated tactical defense technology. Beryllium metal is very attractive to designers of space borne and aircraft systems because of its light weight and extreme stiffness. Incorporated in the structures and instrumentation in space vehicles and satellites. beryllium provides special properties beneficial to precision optical substrates and guidance systems.

The Company's Bucyrus Blades subsidiary continues to broaden its position in the construction and mining industry through aggressive marketing programs. A principal advantage is the Company's ability to supply approximately 10,000 different cutting edges and related wear parts through an extensive worldwide distribution network.



Brush Wellman senior management accepts many invitations each year to speak before various investment groups. The following selection of questions and answers is presented to provide investors with greater insight into Brush Wellman's opportunities and challenges.

Question: What are your future plans for Research and Development?

Answer: We recently announced the formation of an Office of Corporate Technology that has the charter to evaluate current technology and to investigate "over the horizon" technology prospects for Brush Wellman. We also plan to investigate new business opportunities which are technology driven and fall within our general charter of engineered materials.

Our technology programs are primarily directed toward the identification of new beryllium-containing materials as well as the development of even more efficient manufacturing processes.

Question: What is the status of your new beryllium copper alloy, 174?

Answer: We introduced a series of alloys in 1985 called Brush Alloy 174. These patented beryllium-containing alloys were created to compete primarily with other copper-based alloys such as phosphor bronze and are priced accordingly. This is a very attractive material to product designers who are searching for more performance than traditional copper-based alloys can offer, but which do not require all of the properties of high performance beryllium copper. Since introduction, we are pleased with the increasing demand for this material.

Question: You have often stated that your strategic objectives are to grow faster than the growth of your markets. How do you expect to achieve these results?

Answer: The following three points are the framework for our strategies to achieve that level of growth. We must continue to: increase market penetration against competitive materials in our current markets; expand the number of end markets for our materials by actively seeking new applications; and we must continue to grow in international markets.

Question: You state that automotive electronics is an important market for you. If auto production is down, how can that remain a growth area for you?

Answer: It is a growth area because the number of electronic applications per automobile continues to increase. In addition to an increasing number of applications, the requirements of high reliability and more performance from smaller components is increasing. Therefore, we are benefiting from the increasing number of new electronic applications and, in some instances, we are displacing other material as the requirements and tolerances become stricter. It is quite possible that with a flat or small decline in worldwide automobile production in 1988, total consumption of our materials could still increase.

Question: Would you please tell me what the unique characteristics are of beryllium copper?

Answer: Beryllium copper offers the combination of elastic compliance, fatigue resistance and electrical conductivity. Elasticity is the spring force, and compliance is the ability to deflect over a large range and return to precisely the original position without deforming. Fatigue resistance is the ability to resist damage from repeated flexing.

Question: What are the special properties of beryllia ceramic?

Answer: Beryllia is an electrical insulator having thermal conductivity normally associated with metals. The combination of these properties with high strength makes beryllia ceramic a preferred material in advanced electronics, microelectronics, semiconductor and laser applications.

Question: What is beryllium?

Answer: The element beryllium is one of the lightest structural metals known, weighing approximately one third less than aluminum on a pound per cubic inch basis. It has specific stiffness six times greater than that of steel. Beryllium has the highest heat absorbing capacity of all metals and can absorb approximately five times more heat than copper on an equal weight basis. It is also the best thermal conductor among the structural metals on an equal weight basis.

Question: You mentioned the toxicity of beryllium. Is this a constraint on its production and use?

Answer: The air quality standards for the safe processing of beryllium are among the most stringent in American industry. Brush Wellman operates an extensive program that incorporates the use of modern ventilation systems and involves the education of our employees as well as our customers on the proper handling of beryllium products.

By observing prescribed standards and proven safety practices, beryllium and beryllium-containing materials are safely used in a variety of industrial and commercial applications. Independent studies during the last several decades demonstrate the effectiveness of air standards and control measures in reducing the incidence of adverse effects due to beryllium exposure at a time when the uses and applications of beryllium have increased.

Question: What is the purpose of the "near-net-shape" equipment Brush has installed?

Answer: This equipment and technology provide opportunities for the economical fabrication of beryllium metal structures to shapes closer to the required finished dimensions and enable us to be more cost competitive as compared to parts made from other high performance engineered materials. An important advantage to our customers is a reduction in the amount of machining required to form the final part.

We have invested in excess of \$8 million over the past three years to further develop our near-net-shape capabilities, including the installation of hot and cold isostatic presses. In addition, continued development of near-net-shape fabrication processes represents the principal source of recent increases in our research and development expenses.

Question: Does the Company have a very large supply of beryllium-bearing ore?

Answer: We have our own supply of bertrandite ore in Utah which is substantial. Also, we can process beryl ore which is available in significant quantities from world markets.

An ongoing drilling program has consistently added to proved reserves. These are the estimated quantities of ore commercially recoverable by the open pit method. Additional ore is known to exist at greater depths. In 1982, our reported proved bertrandite ore reserves were 4.4 million tons. Since then, we have milled over a half million tons of the ore, and our proved ore reserves are now more than six million tons.

Although the possession of ore is important, success in this business is related far more to technological developments, safe processing and manufacturing efficiencies. Our growth results from engineering the highest quality materials to precise specifications and broadening the number of technology-based applications for those engineered materials.

Consolidated Statements of Income

Brush Wellman Inc. and Subsidiaries Years ended December 31, 1987, 1986 and 1985 (Dollars in thousands except per share amounts)

	1987	1986	1985
Net sales	\$307,571	\$241,428	\$242,902
Costs and expenses:			
Cost of sales	211,885	161,392	158,216
Selling, administrative and general expenses	38,408	30,479	29,357
Research and development expenses	6,530	5,311	4,964
Exploration expenses	173	202	232
Interest expense	2,965	2,148	1,176
Other — net	1,787	1,643	797
	261,748	201,175	194,742
Income From Continuing Operations Before Income Taxes	45,823	40,253	48,160
Income taxes:			
Currently payable	17,633	13,931	13,760
Deferred	2,025	3,647	6,488
	19,658	17,578	20,248
Income From Continuing Operations	26,165	22,675	27,912
Discontinued Operations			(10,025)
Net Income	\$ 26,165	\$ 22,675	\$ 17,887
Income (loss) per share of Common Stock:			
Continuing operations	\$1.38	\$1.20	\$1.48
Discontinued operations		_	(.53)
Net Income Per Share of Common Stock	\$1.38	\$1.20	\$.95
Average number of shares of Common Stock outstanding	18,938,535	18,900,904	18,920,226

Consolidated Statements of Changes in Financial Position

Brush Wellman Inc. and Subsidiaries Years ended December 31, 1987, 1986 and 1985 (Dollars in thousands)

	1987	1986	1985
Funds From Operations			
Continuing operations:			
Net income	\$26,165	\$22,675	\$ 27,912
Items included not affecting funds:			
Depreciation and amortization	16,670	14,263	12,144
Amortization of intangible assets	2,039	2,002	2,077
Amortization of mine development	3,389	1,638	1,489
Increase in deferred income taxes	2,452	2,401	6,154
Provided From Continuing Operations	50,715	42,979	49,776
Provided from discontinued operations	30,7 13	72,373	738
Total Provided From Operations	50,715	42,979	50,514
Funds From Other Sources			
Decrease in net assets of discontinued operations		10,714	
Decrease in operating working capital	-		11,231
Increase in other long-term liabilities	2,063	8,270	
Other — net	_		2,940
	2,063	18,984	14,171
Financing Activities			
Increase (Decrease) in long-term debt	(1,082)	300	1,636
Increase (Decrease) in short-term debt	9,219	(2,796)	3,200
Issuance of Common Stock under stock option plans	3,603	1,831	1,931
	11,740	(665)	6,767
	The second second	The second second	
Funds Available After Financing Activities Less Uses of Funds	64,518	61,298	71,452
	20.405	7011	
Increase in operating working capital	20,495	7,044	44 211
Expenditures for property, plant and equipment	18,517	25,666	44,211
Expenditures for mine development	581	3,451	7,548
Purchase of Common Stock for treasury	11,695	34	312
Cash dividends	11,093	10,337	9,531
Net assets of business purchased		13,700	
Other investments	3,305	3,869	38
Other — net	4,461	927	
	70,147	65,028	61,640
Net Change in Cash and Cash Equivalents	\$ (5,629)	\$ (3,730)	\$ 9,812
Increase (Decrease) in Operating Working Capital Accounts receivable	£ 0.20=	¢ 1 270	¢(15.05=)
	\$ 9,395	\$ 1,370	\$(15,855)
Inventories	14,457	2,039	(10,888)
Prepaid expenses and other	2,306	3,714	(1,481)
Accounts payable	(1,757)	834	3,876
Income taxes	(2,276)	(2,413)	3,888
Other accrued liabilities	(1,630)	1,500	2,618
Reclassification of working capital of			
discontinued operations			6,611
	\$20,495	\$ 7,044	\$(11,231)
		Constant to the last	Berlin and

Consolidated Balance Sheets

Brush Wellman Inc. and Subsidiaries December 31, 1987 and 1986 (Dollars in thousands)

	1987	1986
rent Assets		1300
ash and cash equivalents	\$ 16,611	\$ 22,240
ccounts receivable	44,473	35,078
ventories	102,998	88,541
repaid expenses and other	13,675	11,369
Total Current Assets	177,757	157,228
nnology, Investments and Other Assets	29,942	24,480
perty, Plant and Equipment		
and	4,668	4,078
uildings	57,091	54,478
lachinery and equipment	184,390	168,244
onstruction in progress	4,435 (115,858)	3,870 (99,501)
llowances for depreciation	134,726	131,169
tineral resources	4,772	4,724
fine development.	11,187	18,882
llowances for amortization and depletion	(5,856)	(10,668)
nowances for amortization and depiction	10,103	12,938
Property, Plant and Equipment — net	144,829	144,107
odwill	14,945	15,395
	\$367,473	\$341,210
pilities and Shareholders' Equity		
rent Liabilities		
hort-term debt	\$ 27,325	\$ 18,106
ccounts payable	10,381	8,624
alaries and wages	5,413	5,862
axes other than income taxes	2,599 12,375	2,201 10,842
Other liabilities and accrued items	2,782	2,634
Dividends payable	7,819	5,543
Total Current Liabilities	68,694	53,812
er Long-Term Liabilities	10,333	8,270
g-Term Debt	25,481	26,563
erred Income Taxes	20,292	17,840
reholders' Equity		
Common Stock	21,118	20,994
dditional paid-in capital	42,804	39,325
etained income	199,264	183,224
	263,186	243,543
ess Common Stock in treasury	20,513	8,818
Total Shareholders' Equity	242,673	234,725
	\$367,473	\$341,210

Consolidated Statements of Shareholders' Equity

Brush Wellman Inc. and Subsidiaries Years ended December 31, 1987, 1986 and 1985 (Dollars in thousands except per share amounts)

	Common Stock	Additional Paid-In Capital	Retained Income	Common Stock in Treasury
Balances at January 1, 1985Net income	\$20,791	\$35,766	\$162,465 17,887 (9,531)	\$ 8,472
Proceeds from sale of 109,150 shares under option plans	109	1,268 554		
Purchase of shares for treasury			(72)	312
Balances at December 31, 1985	20,900	37,588	170,749	8,784
Net income			22,675 (10,337)	
Proceeds from sale of 93,786 shares under option plans	94	1,277 460		34
Foreign currency translation adjustment			137	
Balances at December 31, 1986	20,994	39,325	183,224	8,818
Net income			26,165 (11,093)	
Proceeds from sale of 124,204 shares under option plans	124	2,863 616		
Purchase of shares for treasury			968	11,695
Balances at December 31, 1987	\$21,118	\$42,804	\$199,264	\$20,513

Notes to Consolidated Financial Statements

Brush Wellman Inc. and Subsidiaries December 31, 1987

The Company is in the business of manufacturing and selling engineered materials to industrial customers throughout the world.

Note A — Accounting Policies

Consolidation: The consolidated financial statements include the accounts of the Company and its subsidiaries, all of which are wholly-owned. Investments in affiliates (20% to 50% ownership) are accounted for by the equity method; other investments are carried at cost.

Inventories: Inventories are stated at the lower of cost or market. The cost of all domestic inventories except ore and supplies is determined using the last-in, first-out (LIFO) method. The remainder of the inventories are stated principally at average cost.

Property, Plant and Equipment: Property, plant and equipment is stated on the basis of cost. Depreciation is computed principally by the straight-line method, except certain facilities for which depreciation is computed by the sum-of-the-years digits method.

Goodwill and Technology: Goodwill is amortized by the straight-line method over forty-year periods and the cost of technology is amortized over estimated economic lives (five to ten year periods).

Income Taxes: Deferred income taxes are provided to recognize the effect of timing differences between financial and tax accounting, principally for mine development and depreciation. Federal income taxes are reduced by the investment credit using the flow-through method.

Net Income Per Share: Net income per share is based on the weighted average number of outstanding shares of common stock including common stock equivalents (stock options) as determined under the treasury stock method.

Reclassification: Certain prior year amounts have been reclassified to conform to the 1987 presentation.

Note B — Acquisition

On December 29, 1986, the Company acquired for cash the common stock of Williams Gold Refining Co., Inc. (Williams Gold). The transaction has been accounted for as a purchase. Allocation of the \$13,700,000 purchase price of the Williams Gold business was based on fair market values of assets. A summary of assets acquired and liabilities assumed is as follows:

(1)0	llars in	thousan	nds

Current assets	\$20,170
Other assets	2,101
Property, plant and equipment	5,525
Goodwill	239
	28,035
Current liabilities	(14,044)
Other liabilities	(291)
	\$13,700

The effect of the purchase of this business, on an unaudited pro forma basis, assuming the acquisition occurred January 1, 1985, would be to increase net sales for 1986 and 1985 by \$35,000,000 and \$29,000,000, respectively, and would have had an insignificant effect on net income. The pro forma data are not necessarily indicative of the results that would have occurred.

Note C — Discontinued Operations

In 1985, the Company announced a plan to divest its friction products business and provided for the loss on disposal. Accordingly, operating results of this business were reclassified in the consolidated statements of income as discontinued operations. The business was sold in the second quarter of 1986. A summary of discontinued operations for 1985 follows:

(Dollars in thousands)

Net sales	\$ 33,312
Loss from discontinued operations	\$ (3,381)
Income tax benefit	(1,587)
	(1,794)
Provision for loss on disposal — net	
of income tax benefit of \$5,484,000	(8,231)
Discontinued operations	\$(10,025)

Note D — Inventories

Inventories in the consolidated balance sheets are summarized as follows:

	December 31	
(Dollars in thousands)	1987	1986
Principally average cost:	-146	
Raw materials and supplies	\$22,798	\$24,491
In process	63,258	48,210
Finished	29,932	22,269
	115,988	94,970
Excess of average cost over LIFO inventory value	12,990	6,429
	\$102,998	\$88,541

Inventories aggregating \$78,746,000 and \$66,974,000 are stated at LIFO at December 31, 1987 and 1986, respectively.

Note E — Interest

Interest expense associated with active construction and mine development projects is capitalized and amortized over the future useful lives of the related assets. Interest costs capitalized and the amounts amortized are as follows:

(Dollars in thousands)	1987	1986	1985
Interest incurred	\$3,574	\$3,449	\$3,528
Less capitalized interest	609	1,301	2,352
	\$2,965	\$2,148	\$1,176
Amortization, included principally in			
cost of sales	\$ 535	\$ 488	\$ 424

Note F — Debt

A summary of long-term debt follows:

	December 31	
(Dollars in thousands)	1987	1986
12.50% notes payable — \$1 million per year (plus \$1 million annual optional prepayment, limited to \$4.5 million) beginning in 1987	\$11,000	\$13,000
7.25% — 12% industrial development revenue bonds payable in installments beginning	411,000	\$15,000
in 1996	9,200	9,200
in 1990 through 1997	4,434	3,446
Mortgage notes and other	847	917
	\$25,481	\$26,563

The Company has a credit agreement with six banks which provides a maximum availability of \$35,000,000 on a revolving credit basis through April 17, 1989, decreasing in equal semi-annual amounts until October 17, 1992. Borrowings may be made under the Base Lending Rate, the London Interbank Eurodollar Market Rate or the Domestic Certificate of Deposit Rate plus factors varying between zero and 0.625%. Commitment fees are required to be paid on the unused portion of the credit varying between 0.25% and 0.375%. At December 31, 1987, no borrowings were outstanding under the credit agreement.

The loan agreements include certain restrictive covenants covering the incurrence of additional debt, maintenance of working capital, net worth and payment of cash dividends. Under the most restrictive covenant, retained income of \$29,296,000 at December 31, 1987, was available for payment of cash dividends.

The Company has \$27,325,000 of short-term debt outstanding under bank lines of credit totaling \$49,803,000. Of the amount outstanding, \$12,141,000 is payable in foreign currencies and \$13,184,000 is denominated in gold.

Note G — Capital Stock

The Company has 5,000,000 shares of Serial Preferred Stock authorized (no par value), none of which has been issued, and 45,000,000 shares of Common Stock authorized (\$1 par value). At December 31, 1987, there were 21,118,350 shares of Common Stock issued (20,994,146 shares at December 31, 1986) including 2,686,647 shares held in Treasury (2,178,347 shares at December 31, 1986). The terms of the Serial Preferred Stock, including dividends, redemption and conversion, will be determined by the Board of Directors prior to issuance.

On January 26, 1988, the Company's Board of Directors declared a dividend of one preferred stock purchase right for each outstanding share of Common Stock. Each right entitles the shareholder to buy one one-hundredth of a share of Serial Preferred Stock, Series A, at an initial exercise price of \$100. 450,000 unissued shares of Serial Preferred Stock have been designated as Series A Preferred Stock. Each share of Series A Preferred Stock will be entitled to participate in dividends on an equivalent basis with one hundred shares of Brush Wellman Common Stock. Each share of Series A Preferred Stock will be entitled to one vote. The rights are not exercisable and will not be evidenced by separate right certificates until ten days after any person or group acquires beneficial ownership of 20% or more (or announces a tender offer for 30% or more) of Brush Wellman Common Stock.

Brush Wellman Inc. and Subsidiaries December 31, 1987

Note G — Capital Stock (Continued)

After the rights become exercisable, if the Company is a party to certain merger or business combination transactions or transfers 50% or more of its assets or earning power, or if the acquirer engages in certain self-dealing practices, or if a person or group becomes the beneficial owner of 50% or more of Brush Wellman Common Stock, each right (except those held by the acquirer) will entitle its holder to purchase shares of Brush Wellman Common Stock (or, under certain circumstances, the acquirer's common stock) worth twice the exercise price. The rights expire on January 26, 1998 and can be redeemed for 3 cents per right under certain circumstances.

In October, 1987, the Company began a program to repurchase up to 1,900,000 shares of its Common Stock. Through December 31, 1987, the Company repurchased 508,300 shares at a total cost of \$11,695,000 under this program.

The 1984 Stock Option Plan authorizes the granting of options for shares of Common Stock at not less than the fair market value of the shares at the date of grant. Options may be qualified or nonqualified, or a combination thereof. Options outstanding under the 1984 plan and previous plans become exercisable over a four-year period and expire ten years from the date of the grant.

The Company has a plan authorizing the granting of stock appreciation rights related to options granted under any stock option plan. Such rights permit an optionee, in lieu of exercising all or a portion of an option, to receive an amount equal to 100% (or such lesser percentage as the Compensation Committee may determine) of the excess at date of exercise of the market price of the Common Stock over the option price. Such amount may be paid in cash, Common Stock or in such a manner as the Committee may determine. During 1987, no stock appreciation rights were granted (7,920 in 1986 and 31,812 in 1985) and none were exercised (15,386 in 1986 and 12,386 in 1985). At December 31, 1987, 7,700 stock appreciation rights were outstanding and 696,550 stock appreciation rights were available for future grants.

A summary of option activity during the years 1987, 1986 and 1985 follows:

	Shares	Option Prices
0 !		
Outstanding at Jan. 1, 1985	872,282	\$ 1.92 to \$28.66
Granted	93,500	35.94
Exercised	(109, 150)	1.92 to 28.66
Cancelled	(22,800)	13.00 to 35.94
Surrendered under appreciation		
rights alternative	(12,386)	5.42 to 13.00
Outstanding at Dec. 31, 1985	821,446	1.92 to 35.94
Granted	104,400	38.75
Exercised	(93,786)	1.92 to 28.66
Cancelled	(16,845)	13.00 to 35.94
Surrendered under appreciation		
rights alternative	(15,386)	5.42
Outstanding at Dec. 31, 1986	799,829	3.50 to 38.75
Granted	257,500	22.06 to 38.94
Exercised	(124,204)	3.50 to 38.75
Cancelled	(11,100)	27.91 to 38.94
Surrendered under appreciation rights alternative		
Outstanding at Dec. 31, 1987	922,025	\$ 5.42 to \$38.94

At December 31, 1987, options for 558,425 shares (523,289 shares at December 31, 1986) were exercisable, and there were 120,845 shares (367,245 shares at December 31, 1986) available for future grants.

Note H — Operations by Geographic Area

Years ended December 31, 1987, 1986 and 1985 (Dollars in thousands)

	1987			
	Operations in the United States	Operations outside the United States	Adjustments & Eliminations	Consolidated
Sales to unaffiliated customers	\$257,088 25,969	\$50,483	\$(25,969)	\$307,571
Net sales	\$283,057	\$50,483	\$(25,969)	\$307,571
Operating profit	\$ 54,577	\$ 1,332	\$ (710)	\$ 55,199
Corporate expense	£200 420	¢27.006	\$ (4.342)	(6,411) (2,965) \$ 45,823 \$343,082
Identifiable assets at December 31, 1987	\$309,429	\$37,996	\$ (4,343)	24,391
Corporate assets				\$367,473
Total assets at December 31, 1987		10	986	#307,473
	Operations	Operations		
	in the	outside the	Adjustments & Eliminations	Consolidated
Sales to unaffiliated customers	United States \$217,428	United States \$24,000	& Ellilliadions	\$241,428
Transfers between operations	13,820		\$(13,820)	
Net sales	\$231,248	\$24,000	\$(13,820)	\$241,428
Operating profit	\$ 47,034	\$ 257	\$ (454)	\$ 46,837
Corporate expense				(4,436) (2,148)
Income before income taxes				\$ 40,253
Identifiable assets at December 31, 1986	\$287,052	\$28,646	\$ (1,639)	\$314,059
Corporate assets				27,151
Total assets at December 31, 1986				\$341,210
		19	985	
	Operations in the United States	Operations outside the United States	Adjustments & Eliminations	Consolidated
Sales to unaffiliated customers	\$223,112	\$19,790		\$242,902
Transfers between operations	15,747	£10.700	\$(15,747) \$(15,747)	\$242,902
Net sales	\$238,859	\$19,790		\$ 54,906
Operating profit	\$ 56,582	\$ (644)	\$ (1,032)	(5,570)
Corporate expense				(1,176)
Income from continuing operations before income taxes				\$ 48,160
Identifiable assets at December 31, 1985	\$243,355	\$16,759	\$ (1,414)	\$258,700
Corporate assets				40,349
Total assets at December 31, 1985				\$299,049

Transfers between operations are accounted for in the same manner as sales to unaffiliated customers. Corporate assets are principally cash and cash equivalents, and for 1985 include net assets of discontinued operations.

Total international sales, comprised of exports from United States operations and sales by operations outside the United

States, were \$80,533,000 in 1987, \$50,154,000 in 1986 and \$44,399,000 in 1985. Most of these sales represent products manufactured in the United States. Export sales from United States operations amounted to \$30,050,000 in 1987, \$26,154,000 in 1986 and \$24,609,000 in 1985.

Notes to Consolidated Financial Statements

Brush Wellman Inc. and Subsidiaries December 31, 1987

Note I — Income Taxes

The following income tax data relates to income from continuing operations. A reconciliation of the federal statutory and effective income tax rates follows:

	1987	1986	1985
Federal statutory rate	40.0%	46.0%	46.0%
State and local income taxes, net of federal			
tax effect	3.1	2.1	2.5
Difference due to book and tax basis on			
assets of acquired companies	2.4	2.5	2.0
Effect of excess of percentage depletion			
over cost depletion	(2.6)	(4.5)	(3.1)
Investment and research and development			
tax credits	(0.2)	(1.1)	(5.2)
Other items	0.2	(1.3)	(0.2)
	42.9%	43 7%	42.0%
Effective Tax Rate	42.9%	43.7%	42.0%

Included in income taxes currently payable are \$2,395,000, \$1,566,000 and \$2,264,000 of state and local income taxes in 1987, 1986 and 1985, respectively. Federal income taxes have been reduced by investment and research and development tax credits of approximately \$68,000, \$440,000 and \$2,525,000 for 1987, 1986 and 1985, respectively.

On December 30, 1987, the Financial Accounting Standards Board issued Standard No. 96, "Accounting for Income Taxes." The Company has until 1989 to adopt this standard using either the cumulative effect or restatement method. In any event, adoption will have no effect on the Company's cash position nor is it expected to have an adverse impact on reported earnings or shareholders' equity.

Deferred federal income tax provisions resulted from the following timing differences:

(Dollars in thousands)	1987	1986	1985
Accelerated depreciation	\$3,756	\$4,051	\$4,272
Mine development	(925)	595	2,179
Other	(806)	(999)	37
	\$2,025	\$3,647	\$6,488
Other			\$6,4

Note J — Pension and Post-Retirement Benefits

The Company and its subsidiaries have noncontributory pension plans covering substantially all U.S. employees. Plans provide benefits based on the participants' years of service and compensation or stated amounts for each year of service. The Company's funding policy is to make the minimum actuarially computed annual contributions required by applicable regulations.

Effective January 1, 1986, the Company elected early adoption of Financial Accounting Standard No. 87, "Employers' Accounting for Pensions."

A summary of the components of net periodic pension cost for pension plans follows (in thousands):

	1987	1986
Defined benefit plans:		
Service cost — benefits earned during the period	\$1,360	\$1,169
Interest cost on projected benefit obligation	2,844	2,463
Actual return on plan assets	(2,214)	(5,553)
Net amortization and deferral	(1,790)	2,241
Total expense	\$ 200	\$ 320

Recorded pension expense was \$1,522,000 for 1985 and has not been restated. The decrease in 1986 pension expense is principally due to the accounting change.

Assumptions used in accounting for the pension plans as of December 31, 1987 and 1986 were:

Weighted-average discount rates89	%
Rates of increase in compensation levels	%
Expected long-term rate of return on assets	%

The following table (which reflects the 1986 reclassification to conform to the 1987 presentation) sets forth the funded status of the Company's plans and the amounts recognized in the consolidated balance sheets at December 31 (in thousands):

	Assets Exceed Accumulated Benefits	
	1987	1986
Actuarial present value of benefit obligations:	£ 20.24¢	¢ 26 104
Vested benefit obligation	\$ 28,216	\$ 26,194
Accumulated benefit obligation	\$ 31,343	\$ 29,071
Plan assets at fair value	\$ 56,564	\$ 57,277
Projected benefit obligation	(35,224)	(34,551)
Plan assets in excess of projected benefit		
obligation	21,340	22,726
Unrecognized net gain	(2,597)	(2,793)
Unrecognized net assets at January 1,		
net of amortization	(10,552)	(11,272)
Unrecognized prior service cost	664	_
Tax effect of recording acquired excess pension		
assets	(793)	(825)
Net pension asset recognized at December 31	\$ 8,062	\$ 7,836

Note I — Pension and Post-Retirement Benefits (Continued)

Plan assets consist primarily of listed common stocks, corporate and government bonds and short-term investments.

The Company also has unfunded retirement arrangements for certain employees at December 31, 1987, the projected benefit obligation was \$1,714,000 (\$1,708,300 in 1986) of which \$1,178,900 (\$868,500 in 1986) is included in accrued pension cost.

In addition to providing pension benefits, the Company provides health care and life insurance benefits for certain retired

employees. The costs for these benefits are charged to expense as incurred, and amount to \$771,000 in 1987; \$806,000 in 1986; and \$480,000 in 1985.

In connection with operations discontinued in 1985, the Company retained certain obligations for these employees' post-retirement medical benefits. At December 31, 1987 and 1986, \$6,393,000 and \$7,099,000 relating to such medical benefits were included in Other Long-Term Liabilities.

Note K — Quarterly Data (Unaudited)

Years ended December 31, 1987 and 1986 (Dollars in thousands except per share amounts)

	1987				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Net sales		\$75,686 23,805 31.5% 6,832	\$72,656 19,553 26.9% 4.356	\$86,152 29,586 34.3% 8,516	\$307,571 95,686 31.1% 26,165
Net income	.34	.36 .15	.23 .15	.45 .15	1.38
High. Low	38.25 26.25	33.75	34.88 1986	19.00	
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Net sales	\$56,045 17,011	\$64,491 21,912	\$57,603 18,607	\$63,289 22,506	\$241,428 80,036
Percent of sales	30.4% 4,550	34.0% 6,226	32.3% 5,700	35.6% 6,199	33.2% 22,675
Per share of Common Stock: Net income	.24	.33	.30	.33	1.20
Dividends	39.88	39.25	32.25	29.13	
High	33.00	31.00	26.00	25.13	

Fourth quarter net income has been reduced by \$360,000 for the reversal of investment tax credit that was included in income for the first three quarters of 1986 and repealed in the fourth quarter by the Tax Reform Act of 1986.

Gross margin for the first three quarters of 1987 and all of 1986 reflects a reclassification of certain expenses.

Report of Ernst & Whinney Independent Auditors

Board of Directors and Shareholders Brush Wellman Inc.

We have examined the consolidated balance sheets of Brush Wellman Inc. and subsidiaries as of December 31, 1987 and 1986, and the related consolidated statements of income, shareholders' equity and changes in financial position for each of the three years in the period ended December 31, 1987. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the consolidated financial position of Brush Wellman Inc. and subsidiaries at December 31, 1987 and 1986, and the consolidated results of their operations and changes in their financial position for each of the three years in the period ended December 31, 1987, in conformity with generally accepted accounting principles applied on a consistent basis.

Ernst + Whinney
Cleveland, Ohio

January 26, 1988

Report of Management

The management of Brush Wellman Inc. is responsible for the contents of the financial statements which are prepared in conformity with generally accepted accounting principles. The financial statements necessarily include amounts based on judgements and estimates. Financial information elsewhere in the annual report is consistent with that in the financial statements.

The Company maintains a comprehensive accounting system which includes controls designed to provide reasonable assurance as to the integrity of financial records and the protection of assets. An internal audit staff is employed to regularly test and evaluate both internal accounting controls and operating procedures. The role of Ernst & Whinney, the independent auditors, is to provide an objective review of the financial statements and the underlying transactions in accordance with generally accepted auditing standards. The report of Ernst & Whinney accompanies the financial statements.

The Audit Committee of the Board of Directors, comprised of directors who are not members of management, meets regularly with management, the independent auditors and the internal auditors to ensure that their respective responsibilities are properly discharged. Ernst & Whinney and the Director of Audit Operations have full and free access to the Audit Committee.

Clark G. Waite

Vice President and Chief Financial Officer

Consolidated Statements of Income Results of Operations

Sales of \$308 million in 1987 represent an increase of 27% over the \$241 million in sales recorded for 1986. Of the increase, about \$38 million is accounted for by Williams Gold Refining Co., Inc., acquired in late December, 1986. Sales of products other than those of Williams Gold increased 12%. Beryllium alloy products, principally beryllium copper, experienced significant growth in worldwide markets. Beryllium copper is used in electrical and electronic connectors, automobiles, instruments, computers, telecommunications equipment, oil field equipment, cameras and other consumer and industrial products.

Continued emphasis on international marketing coupled with the effects of the weaker dollar, particularly in fourth quarter 1987, added to the Company's 1987 sales. Total international sales in 1987 were \$81 million which is 61% higher than the 1986 total of \$50 million. Williams Gold contributed about half of the gain. Beryllium copper is the Company's most important product in international markets where demand was strong throughout 1987.

Sales of beryllium-containing products and related services were \$214 million in 1987 as compared to \$189 million in 1986 and \$188 million in 1985. The 13% gain for 1987 is primarily attributable to beryllium alloy products, the Company's largest product line. Beryllium metal sales declined in 1987 as a result of reduced defense program requirements. This trend was reversed in fourth quarter 1987. Beryllia ceramic sales posted a modest increase with greater shipments of laser, aerospace and automotive electronics components.

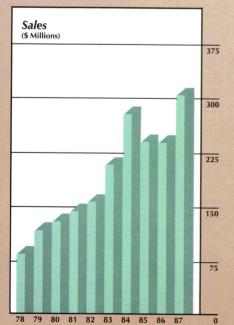
Sales of ground engaging cutting edges, used as replacement blades on construction and snow removal equipment, were \$24 million in 1987, and \$23 million in 1986 and in 1985. Tonnage shipments increased in each successive year. In 1987, sales were adversely impacted in the first quarter by light snowfall in major market areas. Other markets and prices were stronger in the fourth quarter when demand for snow removal blades increased as well. The Mexican affiliate became a wholly-owned subsidiary in August, 1987 and contributed to the sales increase.

Sales of other specialty materials, primarily clad metals and precious metal products, were \$70 million in 1987 as compared to \$29 million in 1986 and \$32 million in 1985. The inclusion of Williams Gold accounts for \$38 million of 1987 sales. Clad metal product sales increased in 1987 reflecting better demand from telecommunication and semi-conductor markets. The clad metal products manufactured in England and Japan contributed to sales in 1987.

The small decline in total sales in 1986 as compared to 1985 reflects cessation of deliveries of beryllium metal to the national defense stockpile, offset by higher shipments of beryllium alloys. Ceramic and clad metal sales declined in 1986 reflecting soft markets in electronics and telecommunications. Cutting edge sales in 1986 increased slightly over 1985 as higher tonnage shipments were nearly offset by lower prices.

Operations outside the U.S., identified in Note H to the Financial Statements, encompass all the aforementioned product lines. Subsidiaries in Japan, Germany and the United Kingdom distribute beryllium alloy products manufactured in the U.S. Operating profit from the distribution function is only part of the total contributed by the sale of these products.

The subsidiary in Japan also processes and sells specialty clad metals. The relatively high fixed costs and startup expenses associated with that manufacturing facility resulted in an operating loss in 1987. The related assets amount to \$11 million.



Cost of sales increased 31% from 1986 to 1987 as compared to the 27% increase in sales. The resulting gross margin (sales less cost of sales) in 1987 was 31.1% of sales as compared to 33.2% in 1986. The addition of Williams Gold, wherein about two thirds of sales represent a passthrough of precious metal cost, caused the margin percentage to drop. Absent this effect, the gross margin rate improved as would be expected from an increase in sales and production volumes.

Equipment installed in the recent alloy expansion is proving more efficient as startup problems that adversely affected 1986 have been largely resolved. However, shutdown and assimilation of operations from the New Jersey ceramic plant added to costs, as did programs aimed at improving the competitive position of clad metal products. Maintenance and repair expenses increased \$3.6 million, or 24%, in 1987 over 1986 reflecting greater production activity and more sophisticated equipment and controls. Depreciation expense was \$16.7 million in 1987, up from \$14.3 million in 1986; Williams Gold accounted for \$1.0 million of the increase. The relatively weak U. S. dollar also enhanced gross margin as local currency sales translate into more dollars with only local selling and distribution expenses rising, except in Japan where clad metal startup costs and fixed expenses had an adverse effect.

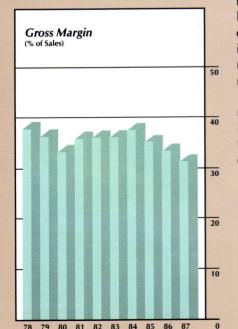
In 1986 as compared to 1985, gross margin fell to 33.2% of sales from 34.9%. Capacity expansion combined with lower production volumes, startup expenses, new product introduction and a less favorable product mix were adverse factors in 1986. The dollar's comparative weakness had a favorable effect.

Selling, administrative and general expenses increased to \$38.4 million or 12.5% of sales in 1987 from \$30.5 million or 12.6% of sales in 1986. The inclusion of Williams Gold accounts for \$3.0 million of the increase. Other sources of increased 1987 expense include greater international sales and marketing efforts in stronger local currencies, more alloy sales through domestic distribution centers and added administrative and corporate expense.

For 1986 as compared to 1985, selling, administrative and general expenses increased by 4% and were 12.6% of sales in 1986 versus 12.1% of sales in 1985. International activities accounted for much of the increased expense while lower incentive compensation awards nearly offset higher domestic selling and distribution expenses.

Research and development expenses increased 23% to \$6.5 million in 1987 from \$5.3 million in 1986. Continued development of near-net-shape fabrication processes for beryllium metal was the principal source of the increase. Williams Gold also added research and development expenses to the 1987 total. In 1986, research and development expenses increased 7% over the 1985 expenditures, reflecting a decrease in government sponsored research and an increase in Company-funded beryllium metal projects. As a percent of sales, research and development expenses remain in the 2.0% to 2.2% range.

Interest expense, net of amounts capitalized on active construction and mine development projects, was \$3.0 million in 1987 as compared to \$2.1 million in 1986. The difference is largely accounted for by the smaller amount capitalized. Interest incurred before capitalization was \$3.6 million in 1987, \$3.4 million in 1986 and \$3.5 million in 1985. In 1985, net interest expense was only \$1.2 million because many projects were in progress during that year.

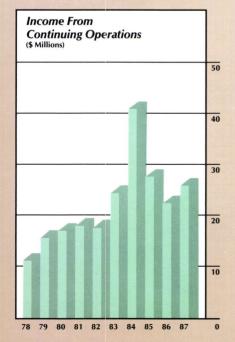


Other-net was an expense of \$1.8 million in 1987, \$1.6 million in 1986 and \$0.8 million in 1985. The largest 1987 expense item, \$1.4 million, is currency translation losses related to debt denominated in local currencies. This debt is used to finance and hedge local currency assets including inventory to be sold in that currency. Such translation losses tend to offset gains in gross margin obtained when the local currency strengthens. The 1986 and 1985 accounts have been reclassified in this respect to present a consistent comparison with 1987. Translation losses included in other-net after such reclassification were \$1.0 million in 1986 and \$1.7 million in 1985. Another component of the other-net category is interest income which was \$1.5 million in 1987, \$1.8 million in 1986 and \$1.3 million in 1985. These amounts are influenced by average cash balances and the level of interest rates. Other non-operating expenses include amortization of goodwill, cash discounts allowed and, in 1986, a \$1.4 million provision for closing the New Jersey ceramic plant.

Income before income taxes in 1987 was \$45.8 million, 14% above 1986 pretax income of \$40.3 million. The 1987 increase is associated with higher sales and margin amounts, offset in part by greater expenses discussed above. The 16% decrease in 1986 from 1985 pretax income of \$48.2 million is associated with a less favorable product mix, lower production volumes, greater depreciation and other expenses including interest as well as the \$1.4 million provision for the plant closure.

Income taxes were provided for in 1987 at an effective rate of 42.9% of pretax income as compared to a 43.7% rate in 1986. The 1987 federal rate was 40%, down from 46% in 1986. The investment tax credit was eliminated for projects commencing after 1985. Foreign tax provisions were somewhat higher in 1987. Further decrease of the federal rate to 34% will lead to an estimated overall effective tax rate of 39% for 1988. Relatively large investment tax credits gave rise to the 42.0% rate employed in 1985.

Net income was \$26.2 million in 1987 as compared to \$22.7 million in 1986. The 15% improvement is due to the 14% higher pretax income and the slightly lower tax rate. The fourth quarter repurchase of common shares had no discernable impact on earnings per share in 1987. If this program continues as expected, 1988 per share results will be enhanced by about 2 percent, after allowing for lost investment income. Higher costs and expenses together with the higher tax rate caused 1986 net income to decrease 19% from 1985 income of \$27.9 million from continuing operations. In 1985, the Company recorded a \$10.0 million provision for loss on the sale of the discontinued friction products business. The business was sold in 1986 and has had no further impact on net income.



Financial Position

Capital Resources and Liquidity

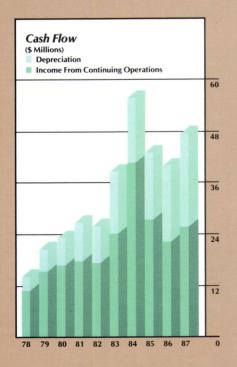
Brush Wellman's financial condition is strong with cash in excess of current needs, low debt and ample available credit. Long-term debt at December 31, 1987 was \$25 million or 10% of total capital. Funds provided from operations in 1987 amounted to \$51 million.

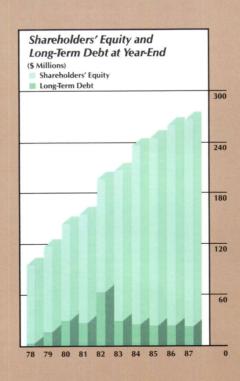
Capital and mine development expenditures in 1987 were \$19 million and \$12 million was expended to repurchase 508,300 shares of Common Stock during fourth quarter 1987. The program is continuing as the repurchase of up to 1,900,000 shares was authorized by the Board.

During 1987, funds were used to support increases in inventories and accounts receivable amounting to \$14 million and \$9 million, respectively. These increases relate to greater sales and production rates, particularly in fourth quarter 1987. Finished goods inventories, which are primarily beryllium alloy, are higher because of increased sales in that product line where customer service is so important.

Beryllium alloy finished goods outside the U.S. and related local currency receivables are largely financed with local currency borrowing. This accounts for most of the \$9 million increase in short-term debt.

Funds provided from operations in 1986 were \$43 million plus \$11 million from the disposal of the discontinued friction products business. Cash was used principally for capital and mine development projects (\$29 million) and the acquisition of Williams Gold (\$14 million). Total debt increased by the approximate amount associated with gold-denominated borrowing to finance and hedge Williams Gold's precious metal inventory. At the end of 1986, long-term debt was \$27 million or 10% of total capital.





Ore Reserves

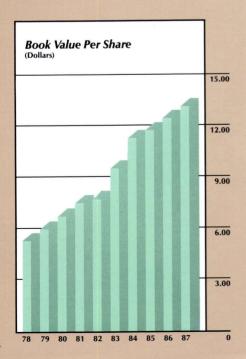
The Company's reserves of beryllium-bearing bertrandite ore are located in Juab County, Utah. An ongoing drilling program has consistently added to proved reserves. Proved reserves are the estimated quantities of ore commercially recoverable by the open pit method. Additional ore is known to exist at greater depths. The Company augments its proved reserves of bertrandite ore through the purchase of imported beryl ore which is also processed at the Utah extraction plant.

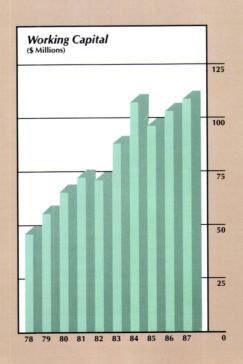
	1987	1986	1985
Proved bertrandite ore reserves at year-end			
(thousands of tons)	6,039	5,993	5,653
Bertrandite ore processed			
(thousands of tons)	101	110	95

Inflation and Changing Prices

The prices of major raw materials such as gold, steel and copper purchased by the Company increased during 1987 after 2 years of decreases. Such changes in costs are generally reflected in selling price adjustments. The prices of labor and other factors of production have generally increased with inflation. Additions to capacity, while more expensive over time, usually result in greater productivity or improved yields. New products, process improvements and product pricing policies have enabled the Company to maintain its margins and generally offset the impact of inflation. The Company generally employs the last-in, first-out (LIFO) inventory valuation method to more closely match current costs with revenues. The greater excess of average cost over LIFO inventory value (the LIFO reserve) at December 31, 1987 as compared to the prior year-end reflects, in part, higher current prices of raw materials.

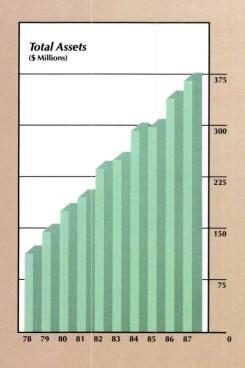
Selected Financial Data					
(Dollars in thousands except per share amounts)	1987	1986	1985	1984	1983
For The Year					
Net sales	\$ 307,571	\$ 241,428	\$ 242,902	\$ 281,142	\$ 210,192
Cost of sales	211,885	161,392	158,216	176,264	134,739
Interest expense	2,965	2,148	1,176	2,795	4,019
Income from continuing operations					
before income taxes	45,823	40,253	48,160	69,088	41,945
Income taxes	19,658	17,578	20,248	27,856	17,317
Income from continuing operations	26,165	22,675	27,912	41,232	24,628
Net income	26,165	22,675	17,887	41,539	25,697
Per share of Common Stock:					
Income from continuing operations	1.38	1.20	1.48	2.19	1.33
Net income	1.38	1.20	.95	2.20	1.39
Cash dividends declared	.59	.55	.51	.47	.42
Depreciation and amortization	22,098	17,903	15,710	15,292	14,513
Capital expenditures	18,517	25,666	44,211	29,626	19,805
Mine development expenditures	581	3,451	7,548	215	151
Van End Position					
Year-End Position	109,063	103,416	96,480	107,506	88,166
Working capital	2.6 to 1	2.9 to 1	3.6 to 1	3.4 to 1	3.8 to 1
	2.0 10 1	2.5 10 1	3.0 10 1	3.4101	3.0 10 1
Property and equipment — At cost	266,543	254,276	222,617	208,459	180,861
Cost less depreciation	144,829	144,107	125,643	110,925	97,728
Total assets	367,473	341,210	299,049	294,196	251,655
Long-term debt	25,481	26,563	26,263	27,627	31,650
Shareholders' equity	242,673	234,725	220,453	210,550	176,240
Book value per share.	13.17	12.48	11.77	11.31	9.54
Number of shares of stock outstanding	18,431,703	18,815,799	18,723,013	18,623,780	18,482,412
Shareholders of record	4,212	4,522	4,916	4.739	4,548
Number of employees	2,564	2,266	1,860	2,190	1,906
Number of employees	2,004	2,200	.,000	-/	

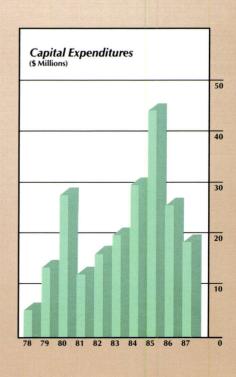




1982	1981	1980	1979	1978	1977
\$ 157,117	\$ 144,053	\$ 129,840	\$ 117,247	\$ 84,470	\$ 63,779
100,788	92,839	86,947	75,041	52,773	42,504
2,974	3,090	1,957	1,257	1,046	1,156
29,723	29,617	26,518	28,169	20,489	11,069
12,002	11,493	9,360	12,409	9,191	5,280
17,721	18,124	17,158	15,760	11,298	5,789
11,060	19,294	18,185	17,370	12,151	7,842
1.02 .64 .40 8,661 16,168 492	1.04 1.11 .37 9,071 12,199	1.00 1.06 .33 6,482 27,629	.92 1.01 .31 5,240 13,551	.65 .70 .20 3,245 5,182	.33 .45 .17 3,163 6,799
71,000 3.3 to 1	4,131 72,256 3.5 to 1	2,312 65,250 3.9 to 1	2,830 55,507 3.6 to 1	45,908 4.6 to 1	44,699 6.4 to 1
165,576	161,689	152,179	124,921	105,391	101,090
92,597	89,277	83,661	64,544	51,811	52,227
237,919	195,676	175,795	145,326	113,852	108,404
64,671	29,000	31,750	19,000	5,400	13,700
132,212	127,130	113,396	99,364	91,128	82,309
7.74	7.53	6.75	6.00	5.32	4.82
17,076,926	16,879,122	16,796,952	16,568,322	17,126,622	17,079,522
4,673	5,145	5,440	5,337	5,260	5,626
1,675	1,517	1,360	1,354	1,115	942







Corporate Officers

Henry G. Piper*
Chairman of the Board

Raymond A. Foos*
President and
Chief Executive Officer

Clark G. Waite* Vice President and Chief Financial Officer Treasurer and Secretary

James E. Gulick* Vice President, Planning and Administration and Vice President, Investor Relations

James M. Dudziak Vice President, Operations Services

Daniel Paradiso Controller

William M. Christoff Assistant Treasurer - Taxes

Michael C. Hasychak Assistant Treasurer and Assistant Secretary

Thomas N. Markham, M.D. Medical Director

Jay M. Simon Director, Audit Operations

*Senior Management Committee

Operating Executives

Beryllium/Mining Division

Hugh D. Hanes

Vice President/General Manager Facilities: Delta, Utah Juab County, Utah Salt Lake City, Utah Elmore, Ohio

Alloy Division

Craig B. HarlanVice President/General Manager

Facilities: Elmore, Ohio Reading, Pennsylvania

Electronic Components Division

Andrew J. Sandor Vice President/General Manager

Facilities:
Newburyport, Massachusetts
Tucson, Arizona

Williams Gold Refining Co., Inc., Buffalo, New York Williams Gold Refining Co. of Canada Ltd., Fort Erie, Ontario

Metal Systems Division

Nathan L. Church

Vice President/General Manager Technical Materials, Inc. Facilities: Lincoln, Rhode Island

Cutting Edge Division

L. Samuel EichhornVice President/General Manager
Bucyrus Blades, Inc.

Facilities:
Bucyrus, Ohio
Morrow, Georgia
Bucyrus Blades of Canada Limited:

Bramalea, Ontario Steinbach, Manitoba

Cuchillas Tepeyac, S.A. de C.V. Atlacomulco, Mexico

International Division

Robert H. Rozek

Vice President/General Manager Facilities:

Brush Wellman GmbH, Stuttgart, Germany Brush Wellman Limited,

Reading, England Brush Wellman (Japan), Ltd.:

Tokyo, Japan Fukaya, Japan

tive Officer

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Company

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Corporate Data

Annual Meeting

The Annual Meeting of Shareholders will be held on April 26, 1988 at 11:00 A.M. in the Statler Office Tower, Euclid Avenue & E. 12th Street, Cleveland, Ohio.

Dividend Reinvestment Plan

Brush Wellman has a plan for its shareholders which provides automatic reinvestment of dividends towards the purchase of additional shares of the Company's common stock. For a brochure describing the plan, write to Corporate Headquarters, attention Investor Relations Department.

Form 10-K

A copy of our 1987 Annual Report to the Securities and Exchange Commission (Form 10-K) will be furnished upon written request to the Corporate Secretary. Copies of exhibits will be furnished at cost if specifically requested.

Legal Counsel

Jones, Day, Reavis & Pogue North Point 901 Lakeside Avenue Cleveland, Ohio 44114

Auditors

Ernst & Whinney 1300 Huntington Building Cleveland, Ohio 44115

Transfer Agent and Registrar

AmeriTrust Company National Association 900 Euclid Avenue P.O. Box 6477 Cleveland, Ohio 44101

Stock Listing

New York Stock Exchange Symbol: BW

Corporate Headquarters

Brush Wellman Inc. 1200 Hanna Building Cleveland, Ohio 44115 (216) 443-1000 TWX: 810-421-8284

Facsimile: (216) 443-1161



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